

Docket 85918KNM
Customer No. 01333

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Christopher J. Kralles, et al

BACKPRINTING ASSEMBLY
FOR A PHOTOGRAPHIC
PRINTER

Serial No. 10/728,628

Filed 05 December 2003

Group Art Unit: 2853

Examiner: Ly T. Tran

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Sir:

APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134

Table Of Contents

<u>Table Of Contents</u>	i
<u>Real Party In Interest</u>	1
<u>Related Appeals And Interferences</u>	1
<u>Status Of The Claims</u>	1
<u>Status Of Amendments</u>	1
<u>Summary of Claimed Subject Matter</u>	2
<u>Grounds of Rejection to be Reviewed on Appeal</u>	4
<u>Arguments</u>	5
<u>Summary</u>	9
<u>Conclusion</u>	9
<u>Appendix I - Claims on Appeal</u>	10
<u>Appendix II - Evidence</u>	16
<u>Appendix III – Related Proceedings</u>	17

APPELLANT'S BRIEF ON APPEAL

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the Examiner's Final Rejection of claims 1-24, which was contained in the Office Action mailed May 16, 2007. Applicants timely filed a Pre-Appeal Brief with a Notice of Appeal June 28, 2007, a response to which was sent by the Patent Office on July 24, 2007, indicating the case should proceed to the Board of Patent Appeals and Interferences. A Petition for a one-month Extension of Time is filed herewith, extending the period for filing of the Appeal Brief to September 28, 2007.

Real Party In Interest

Eastman Kodak Company is the real party in interest.

Related Appeals And Interferences

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status Of The Claims

Appendix I provides a clean, double spaced copy of the claims on appeal.

Status Of Amendments

The claims stand as originally filed, having never been amended. The Specification was amended by the filing of May 23, 2006. No amendments to the specification, claims, or drawings have been made since the Final Rejection.

Summary of Claimed Subject Matter

The independent claims pending are 1, 12, and 22, and are supported by the specification at least in the figures and specification as set forth below. There are no claims that are written using means-plus-function language.

1. A printing apparatus (15, Fig. 1) comprising:

a printing section (21, Fig. 1) adapted to print images on photographic media; and

an automatic backprinting assembly (100, Fig. 1) adapted to print information on a back side of photographic media (page 5, lines 20-23);

said automatic backprinting assembly comprising a movable ink jet printhead (102, Fig. 2) which is movable between at least a printing position to print on the back side of the photographic media and a priming position where the printhead is pressurized to force a stream of ink through discharge jets of the printhead (page 5, lines 24-30; page 6, line 8 – page 7, line 2; Figs. 2-5).

12. A backprinting assembly (100, fig. 1) adapted to print information on a backside of photographic media (page 5, lines 20-23), the backprinting assembly comprising:

a movable ink jet printhead (102, Fig. 2) which is movable between at least a printing position to print on the backside of the photographic media and a priming position where the printhead is pressurized to force a stream of ink through discharge jets of the printhead (page 5, lines 24-30; page 6, line 8 – page 7, line 2; Figs. 2-5).

22. A method of providing information on a backside of photographic media during a photographic printing process, the method comprising the steps of:

inserting photographic media into a photographic printer (page 4, line 23 – page 5, line 2);

printing an image onto a frontside of the photographic media (page 5, lines 2-7, 17-20);

backprinting information onto a backside of the media by positioning a printhead in a printing position and directing ink from said printhead onto the backside of said media (page 5, lines 17-23);

moving the printhead from said printing position after a predetermined period of time to a priming position where discharge jets of said printhead face an enclosure (page 5, lines 24-30; page 6, lines 8-10; page 8, lines 3-5; page 9, lines 18-23);

pressurizing said printhead while in said priming position to force a stream of ink through the discharge jets of the printhead and into said enclosure; (page 8, lines 5-7; page 9, lines 7-12, Fig. 7) and

moving said printhead back to said printing position (page 8, lines 12-14, Fig. 4).

Grounds of Rejection to be Reviewed on Appeal

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Claim 1 is rejected under 35 USC 103(a) over Lin (USPN 5,764,263) in view of Kimura (US 2004/0189742);
2. Claims 1-3 and 6-24 are rejected under 35 U.S.C. 103(a) over Lin (USPN 5,764,263) in view of Ishiguro (JP 09-001827) and Cipolla (USPN 6,491,368); and
3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) over Lin in view of Ishiguro and Cipolla as above, and further in view of Watanabe (EP 435276).

Arguments

1. Description of the Claimed Invention

The claimed invention features a backprinting assembly, or method of using the same, wherein the backprinting assembly is a movable ink jet printhead which is movable between at least a printing position to print on the back side of the photographic media, and a priming position where the printhead is pressurized to a prime pressure sufficient to force a stream of ink through discharge jets of the printhead such that dried ink and debris are ejected through the discharge jets of the printhead, as described at least on page 8, lines 5-9. That is, the force removing the debris and dried ink comes from within the printhead.

2. Claim 1 under 35 USC 103(a) over Lin in view of Kimura

Claim 1 is rejected under 35 USC 103(a) over Lin (USPN 5,764,263) in view of Kimura (US 2004/0189742). The Examiner has failed to present a *prima facie* case of obviousness for at least the following reasons.

Lin is directed to an ink jet printing device that is designed to reduce curl of printed paper by printing either a colorless or colored ink on a backside of the paper. Lin does not disclose or suggest moving of either the front or backside printhead to a non-printing position, priming of a printhead, or pressurizing a printhead. This is *admitted* by the Examiner at least at page 3 of the Final Office Action, wherein the Examiner states that Lin “fails to teach the movable ink jet print head which is movable between at least a printing position to a priming position where the print head is pressurized to force a stream of ink through discharge jets of the print head.”

Kimura, as shown at least in Figs. 1 and 11 and described at least at paragraph 0081, discloses pressurizing *pressure control tank 6* to force ink through pipe line 5 to ink jet head 2 and out from nozzle 10. The pressure is applied to the ink in pressure control tank 6, not ink jet head 2. Thus, Kimura does not disclose or suggest pressurizing a printhead to force ink therethrough as set forth in claim 1.

The Examiner states in the Final Office Action, at page 7, that:

Applicant argues that Kimura does not teach pressurizing a print head to force ink therethrough. This argument is not persuasive because ***Kimura discloses pressurizing pressure control tank 6*** to force ink through in pressure control tank to the head and out from the nozzle. ***The pressure is not directly applied to the head*** but through the tank to force the ink out. However, nothing in the claim recites that the pressure must apply directly to the print head. (Emphasis added.)

In contrast to the Examiner's statement at page 7 that "nothing in the claim recites that the pressure must apply directly to the print head,"

Applicants' claim 1 recites in part:

said automatic backprinting assembly comprising a movable ink jet printhead which is movable between at least a printing position to print on the back side of the photographic media and a priming position ***where the printhead is pressurized*** to force a stream of ink through discharge jets of the printhead. (Emphasis added.)

Applicants clearly claim a ***pressurized print head***, which the Examiner ***admits*** at pages 3 and 7 of at least the final Office Action is not taught by either Lin or Kimura.

Because neither Lin nor Kimura, alone or in combination, disclose or suggest ***pressurizing a printhead*** to force a stream of ink through discharge jets of the printhead, as admitted by the Examiner, the combination of references does not disclose or suggest every feature of claim 1. The Examiner has failed to present a *prima facie* case of obviousness against claim 1.

3. Claims 1-3 and 6-24 under 35 U.S.C. 103(a)
over Lin in view of Ishiguro and Cipolla

Claims 1-3 and 6-24 are rejected under 35 U.S.C. 103(a) over Lin in view of Ishiguro and Cipolla. Claims 1, 12, and 22 are independent, all other claims depending therefrom. The Examiner has failed to present a *prima facie* case of obviousness for at least the following reasons.

As discussed in the responses filed May 23, 2006, September 28, 2006, and February 27, 2007, as well as the Pre-Appeal Brief filed June 28, 2007, Lin does not disclose or suggest moving of either the front or backside printhead to a non-printing position, priming of a printhead, or pressurizing a printhead.

Again, this was admitted by the Examiner at least at page 3 of the Final Office Action (see above).

Ishiguro is directed to a printing device wherein the maintenance station is small, performing multiple functions in the same space. As described in paragraph 0014, the maintenance station includes an aspiration pipe 6 comprising a hollow tube 12 with holes 10 therethrough, wherein the tube is covered with a foam 7 which is in contact with the printhead when maintenance is performed. During maintenance, at least the foam is rotated to first clear foreign matter from the nozzles of the printhead (paragraph 0013). Then, **suction** is generated through the aspiration pipe 6 which acts through the porous foam 7 **to suck ink from** the nozzles of the printhead (paragraph 0014). Ishiguro does not disclose or suggest pressurizing the printhead to push out debris, as claimed by Applicants. Instead, Ishiguro **applies suction externally** to the printhead **to pull out** ink.

Cipolla discloses a printing system having a primer for selectively priming one of two printheads in a multicolor printer. As described at col. 5, lines 27-30 and 41-58, the priming system comprises **a vacuum source** in the form of a peristaltic pump for each printhead cap. **“Ink is removed** from the printhead 17, together with any air bubbles therein, **by the vacuum** produced by peristaltic pump 45” (emphasis added; col. 5, lines 54-56). Thus, Cipolla describes using suction in the form of a **vacuum external** to the printhead to remove ink and air bubbles from the printhead.

The Examiner argued at page 5 of the final Office Action that “Cupola shows that using the suction on the nozzle and using positive pressure on the ink are an equivalent structure known in the art.” However, no citation within what is presumed to be Cipolla for this teaching is provided. Applicants note col. 2, lines 29-34, of Cipolla discuss priming of ink jet printheads by either “positive pressure on the ink **in the ink tank** to force ink and entrained air and/or air bubbles out of the ink flow paths” or by use of “**vacuum or suction** on the nozzles to withdraw some ink and thus any trapped air from the printhead” (emphasis added). Cipolla therefore discloses application of pressure to the **ink tank**, or vacuum to the printhead nozzles, and not pressurizing of the printhead itself.

The combination of Lin, Ishiguro, and Cipolla teaches or suggests pulling ink from a printhead using a vacuum applied externally to the printhead. The combination does not disclose or suggest all the features of the claimed invention, in particular, a priming position where *the printhead is pressurized* to a prime pressure sufficient to force a stream of ink through discharge jets of the printhead. No reference or combination of references being presented that teaches, discloses, or suggests pressurizing the printhead as required in all rejected claims, a *prima facie* case of obviousness has not been made.

4. Claims 4 and 5 under 35 U.S.C. 103(a) over Lin
in view of Ishiguro, Cipolla, and Watanabe

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) over Lin (USPN 5,764,263) in view of Ishiguro (JP 09-001827) and Cipolla (USPN 6,491,368), and further in view of Watanabe (EP 435276). The Examiner has failed to present a *prima facie* case of obviousness for at least the following reasons.

Claims 4 and 5 ultimately depend from claim 1. The rejection of claim 1 over Lin in view of Ishiguro and Cipolla is addressed above. The subject matter of claims 4 and 5 is not taught, disclosed, or suggested in view of the combination of Lin, Ishiguro, and Cipolla for at least the same reasons.

Watanabe is directed to a recording unit cartridge, whereby all or a portion of a full-width recording unit can be easily replaced within a printing apparatus. Within the recording unit, the printhead can be moved from a printing to a recovery position, wherein the printhead is activated to print an all ink image, such that the ink is ejected into a reservoir. See col. 9, lines 11-17 and 27-33. Watanabe does not disclose or suggest pressurizing the printhead to remove dried ink or debris. Watanabe thus does not overcome the deficiencies of Lin in view of Ishiguro and Cipolla because Watanabe does not teach, disclose, or suggest at least a printhead having a priming position where *the printhead is pressurized* to a prime pressure sufficient to force a stream of ink through discharge jets of the printhead.

No reference or combination of references has been presented that teaches, discloses, or suggests pressurizing the printhead as required in claims 4 and 5. Therefore, a *prima facie* case of obviousness has not been made.

Summary

The Examiner admits neither Lin nor Kimura teach pressurizing a printhead. The Examiner further admits Ishiguro and Cipolla teach using vacuum or suction external to the printhead to remove debris. Watanabe merely teaches printing to clear the printhead. Thus, no reference alone, or in combination with any other reference, teaches, discloses, or suggests *pressurizing a printhead* to eject pressurized ink. No *prima facie* case of obviousness over any claim having been made, reversal of all rejections is in order.

Conclusion

For the above reasons, Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the rejections of the Examiner and mandate the allowance of Claims 1-24.

Kathleen Neuner Manne/KJW
Telephone: 585-722-9225
Facsimile: 585-477-1148
Enclosures

Respectfully submitted,



Attorney for Appellants
Registration No. 40,101

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

Appendix I - Claims on Appeal

1. (original) A printing apparatus comprising:

a printing section adapted to print images on photographic media;

and

an automatic backprinting assembly adapted to print information on a back side of photographic media;

said automatic backprinting assembly comprising a movable ink jet printhead which is movable between at least a printing position to print on the back side of the photographic media and a priming position where the printhead is pressurized to force a stream of ink through discharge jets of the printhead.

2. (original) A printing apparatus according to claim 1, wherein said automatic backprinting assembly further comprises:

an enclosure having an opening positioned so as to face the discharge jets of said printhead when said printhead is in said priming position, said enclosure being adapted to catch the stream of ink that is forced through the discharge jets of the printhead.

3. (original) A printing apparatus according to claim 2, wherein a wiper pad is positioned at an end of a wall of said enclosure, said wiper pad being adapted to wipe a discharge jet end of said printhead when said printhead moves from said priming position to said printing position so as to remove excess ink from said printhead.

4. (original) A printing apparatus according to claim 2, further comprising a removable ink tray, wherein said printhead and said enclosure are mounted on said ink tray and said ink tray is movable between a non-operative position located partially outside of said printing apparatus and an operative position located within said printing apparatus.

5. (original) A printing apparatus according to claim 4, wherein an absorbent material is provided on a surface of said ink tray and within said enclosure.

6. (original) A printing apparatus according to claim 3, wherein said wiper pad is formed from a material which has little or no loose fibers.

7. (original) A printing apparatus according to claim 1, wherein said printhead is provided on a rotary moving device which is adapted to rotate the printhead between said printing position and said priming position.

8. (original) A printing apparatus according to claim 1, wherein said printhead is mounted on a pivoting device which is adapted to pivot said printhead between said printing position and said priming position.

9. (original) A printing apparatus according to claim 7, wherein said rotary moving device has a center of rotation which causes the printhead to

translate away from the backside of said media as soon as rotary motion of said printhead is initiated.

10. (original) A printing apparatus according to claim 8, wherein said pivoting device is adapted to cause the printhead to translate away from the backside of said media as soon as a pivoting motion of said printhead is initiated.

11. (original) A printing apparatus according to claim 1, wherein said printhead is adapted to provide at least alphanumeric information on the backside of said media.

12. (original) A backprinting assembly adapted to print information on a backside of photographic media, the backprinting assembly comprising:

a movable ink jet printhead which is movable between at least a printing position to print on the backside of the photographic media and a priming position where the printhead is pressurized to force a stream of ink through discharge jets of the printhead.

13. (original) A backprinting assembly according to claim 12, further comprising:

an enclosure having an opening positioned so as to face the discharge jets of said printhead when said printhead is in said priming position,

said enclosure being adapted to catch the stream of ink that is forced through the discharge jets of the printhead.

14. (original) A backprinting assembly according to claim 13, wherein a wiper pad is positioned at an end of a wall of said enclosure, said wiper pad being adapted to wipe a discharge jet end of said printhead when said printhead moves from said priming position to said printing position so as to remove excess ink from said printhead.

15. (original) A backprinting assembly according to claim 13, further comprising an ink tray, wherein said printhead and said enclosure are mounted on said ink tray.

16. (original) A backprinting assembly according to claim 15, wherein an absorbent material is provided on a surface of said ink tray and within said enclosure.

17. (original) A backprinting assembly according to claim 14, wherein said wiper pad is formed from a material which has little or no loose fibers.

18. (original) A backprinting assembly according to claim 12, wherein said printhead is provided on a rotary moving device which is adapted to rotate the printhead between said printing position and said priming position.

19. (original) A backprinting assembly according to claim 12, wherein said printhead is mounted on a pivoting device which is adapted to pivot said printhead between said printing position and said priming position.

20. (original) A backprinting assembly according to claim 18, wherein said rotary moving device has a center of rotation which causes the printhead to translate away from the backside of said media as soon as rotary motion of said printhead is initiated.

21. (original) A backprinting assembly according to claim 19, wherein said pivoting moving device is adapted to cause the printhead to translate away from the backside of said media as soon as a pivoting motion of said printhead is initiated.

22. (original) A method of providing information on a backside of photographic media during a photographic printing process, the method comprising the steps of:

- inserting photographic media into a photographic printer;
- printing an image onto a frontside of the photographic media;
- backprinting information onto a backside of the media by positioning a printhead in a printing position and directing ink from said printhead onto the backside of said media;

moving the printhead from said printing position after a predetermined period of time to a priming position where discharge jets of said printhead face an enclosure;

pressurizing said printhead while in said priming position to force a stream of ink through the discharge jets of the printhead and into said enclosure;
and

moving said printhead back to said printing position.

23. (original) A method according to claim 22, further comprising:

wiping a discharge jet end of said printhead when said printhead moves from said priming position to said printing position so as to remove excess ink from said printhead.

24. (original) A method according to claim 22, wherein said step of moving said printhead from said printing position to said priming position comprises translating said printhead away from the backside of said media as soon as motion of the printhead is initiated.

Appendix II - Evidence

NONE

Appendix III – Related Proceedings

NONE